#### Line Array Speaker

Preliminary Technical Information for System Engineers

Mounting hardware not included



# SOUNDTUBE

## **Key Features**

- Passive, fixed length, low frequency directivity element for SoundTube Line Array.
- Designed for use only with LA880i Line Array.
- Eight 4.5 inch (115 mm) woofers.
- Extends low frequency directivity of line array systems by up to an octave lower than with the LA880i alone.
- Paintable enclosure is constructed of MDF and plywood with metal threaded mounting points.
- Powder coated, paintable steel grille.
- Available in black or white paint finish.
- Custom woodgrain cabinets or paint finishes available (contact us for details).
- Flexible mounting options include surface-mount, pole-mount, ceiling-mount or suspended (flown). (Allen Products mounting accessories sold separately.)
- Euroblock and SpeakOn connectors allow for fast connections and easy daisy chaining.
- UL 1480 UEAY planned.
- Included accessories: safety cable mounting plate and mounting bolts, Euroblock connector, safety cable.
- NOTE: Mounting brackets not included

# Description

NOT a subwoofer, the SoundTube LA808i is designed to increase the directivity of low frequencies in SoundTube's Line Array system. It can be used only in conjunction with the LA880i 3-way line array. The use of the LA808i is recommended in spaces that have a large reverberation time. When a single unit is added to the LA880i, directivity of low frequencies is increased by up to an octave lower than with the LA880i alone. The product's dimensions are identical to those of the LA880i. The LA808i must be placed either directly above or directly below the LA880i in order for the system to work properly. If desired, two LA808i units can be added: one above the LA880i and one below.

# Applications

In combination with the 3-way LA880i, the LA808i LFDE is ideal for PA and sound reinforcement applications. The system's near-field to far-field transition occurs at

### Preliminary Specifications: LA880i with LA808i

System Type	LA880i plus LA808i for extended low frequency directivity
	control
Impedance (Rated) <sup>1</sup>	4 ohm
Sensitivity dB @ 2.83V / 1 m	90.0 dB
Sensitivity dB @ 1 W/1 m <sup>2</sup>	87.0 dB
Frequency Response (-3 dB) <sup>3</sup>	83 Hz - 22 kHz
Frequnecy Response (-10 dB) <sup>3</sup>	75 Hz - 22 kHz
Max. Program Power <sup>4</sup>	500 W
Max. Continuous Power <sup>5</sup>	300 W
Max. SPL dB @ 1 m <sup>6</sup>	112 dB
Coverage Angle (-6 dB @ 2 kHz)	103° horizontal 29° vertical
Coverage Angle (-6 dB @ 10 kHz)	77° horizontal 51° vertical
Coverage Angle (Avg. 2 to 10 kHz)	90° horizontal 60° vertical (200-10k)
Directivity Factor (Q)	9.1
Directivity Index (DI)	12.6 dB
Tap (optional)	AC-LA8-XFMR includes 5 Position rotary switch
Low-Frequency Driver	16- 102mm (4.5 in) woofers, paper with rubber surround
Mid-Frequency Driver	8- 51mm (2.0in) mid range, paper with foam surround
High-Frequency Driver	63.5 mm (2.5 in) planar magnetic ribbon tweeter
Low-Frequency Voice Coil	25.4 mm
	500.0 kHz
Crossover Frequency	
Network Type: Low-Pass	12dB/oct
Network Type: High-Pass	12dB/oct
Enclosure Material Grille	Painted mdf and plywood
	Powder coated steel
Inputs	4 Pin, 5.08 mm Euroblock or SpeakOn for individual or
	daisy chain connection
Colors	Black or white
Height	2076.2 mm (81.74 in)
Width	200.9 mm (7.91 in)
Depth (Including Bracket)	304.5 mm (11.99 in)
Weight	33.9 kg (74.5 lbs)
Shipping Weight	40.9 kg (90.0 lb)
Included Accessories	2 Bent back brackets, 2 Safety cables, 2 Euroblock con-
	nectors, Jumper cable, 2 Link plates
Optional Accessories	AC-LA8-BACK, AC-LA8-LINK, AC-LA8-FLY, 300w
	transformer (AC-LA8-XFMR), plus a variety of mounting
	brackets
Packaging	1 per box, 2 boxes
Regulatory - UL	1480 (UEAY) planned
Regulatory - CE	Approved
RoHS	Approved
<sup>1</sup> Impedance listed per IEC 60268-5	Transformer Taps
	70.1 V Output 100 V Output 25 V Output
<sup>2</sup> 1w1m sensitivity determined using nominal impedance	300 W 112.0 dB 300 W 112.0 dB 38 W 103.0 dB
3 Frequency response measured in half or	150 W 109.0 dB 150 W 109.0 dB 19 W 100.0 dB
full space as dictated by speaker mounting configuration	75 W 106.0 dB 75 W 106.0 dB 10 W 97.0 dB
•	38 W 103.0 dB 38 W 103.0 dB 5 W 94.0 dB
4 Max program power is 3 dB above max continuous power	19 W 100.0 dB
5 Continuous power rating, EIA-426-B test	
6 Max output based on max continuous power	
7 Max useable SPL based on testing by NWAA	
Labs	

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only 3 meters (about 10') from the speakers, maintaining a constant directivity of 40 x 120 degrees throughout the coverage area. The LA880i and LA808i were designed for use in transportation platforms, airports, houses of worship, auditoriums and other public gathering spaces. The LA880i and LA808i are not weatherized and are intended only for indoor applications

## Patented SoundTube Technologies

SoundTube Entertainment and MSE Audio are constantly developing new technologies that enhance audio product performance. SoundTube Entertainment innovations are protected by multiple U.S. and international patents, which explicitly cover SoundTube dome, enclosure and dispersion technologies. MSE Audio actively defends its patents in order to protect SoundTube resellers and end users.

# Technical Data and Specification Tools Technical Data

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data are available from SoundTube Entertainment or at www. soundtube.com.

Technical data and downloads include:

EASE<sup>™</sup> data – 3-D polar plots.

EASE<sup>™</sup> Address – 2-D modeling for distributed systems

Autodesk® Revit® software

Tech Sheets – Technical information and architectural specs for system engineers

SoundTubeSPEC<sup>™</sup> – Proprietary speaker placement software

### **Data Acquisition**

All data for SoundTube speakers are independently collected from and verified by NWAA Labs (www.nwaalabs.com) using their proprietary MACH testing system. All data are collected and analyzed according to ASTM, ISO and AES standards using EASERA, TEF and MLSSA. Full balloon data including both phase and magnitude is compiled into a variety of formats including EASE 4.x, GLL and CLF.

# **Architectural Specifications**

The loudspeaker (LFDE unit) shall be used to enhance the low frequency directivity of a single-cabinet 3-way line array. It shall consist of a single cabinet with eight 4.5 inch (115 mm) woofers. The cabinet shall be the same size as the cabinet housing the 3-way line array.

In tandem with the 3-way line array, the performance specifications of a typical production LFDE unit shall be as follows: usable frequency response shall extend from 75 Hz – 22 kHz (-10 dB). Measured sensitivity (ref. 2.83 V / 1 m) shall be 95 dB. The speaker shall have a rated impedance of 4 ohms. Rated power handling shall be 500 watts and maximum continuous output at 1 meter shall be 112 dB.

The eight low frequency drivers shall include a treated paper cone and butyl rubber surround. They shall use a die cast aluminum basket and a ferrite motor structure. The midrange drivers shall include a treated paper dome with pressed foam surround. They shall use a die cast aluminum basket with a neodymium motor structure. The high frequency driver shall be a planar magnetics (ribbon) unit with a neodymium motor structure.

Mounting points for wall mount, pole mount, ceiling mount or suspension via cables shall be provided. Mounting hardware shall be Allen Products or equivalent. Input connectors shall include a four-position terminal block and Neutrik SpeakOn. The four-position terminal block shall accept from 10 – 22 gauge wire. A jumper cable shall be provided to connect the LFDE unit to the 3-way line array. Builtin low frequency equalization shall automatically be applied to both the LFDE unit and 3-way line array when the two units are properly connected together using the jumper cable.

The enclosure shall be constructed of MDF and plywood with metal 1/4" x 20 threaded inserts mounting points and a steel grille. The enclosure and grille shall be available in black or white textured paint, and shall also be paintable by the installer. A bent back plate with plate mounting hardware and safety cable attachment point shall be included. Speaker mounting brackets and hardware shall be available for use with 3rd party manufacturer mounting systems.

The system shall be the SoundTube LA808i

Low Frequency Directivity Element in conjunction with the SoundTube LA880i line array

# SoundTube Entertainment

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dBSPL

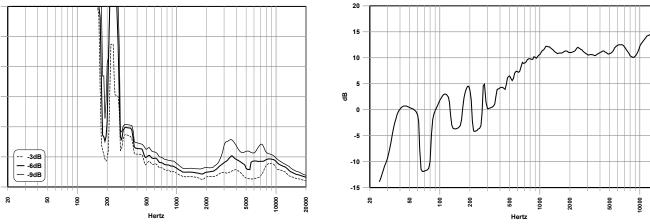
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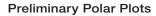
**Preliminary Graphs** 

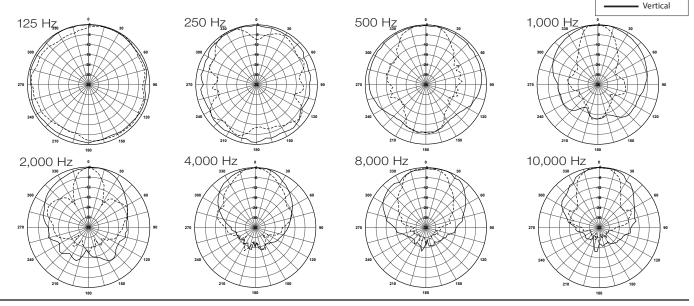
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#### **Frequency Response** surdo 16 --- Impeda Hertz Hertz Vertical Beamwidth (-6dB) **Directivity Index (DI)**

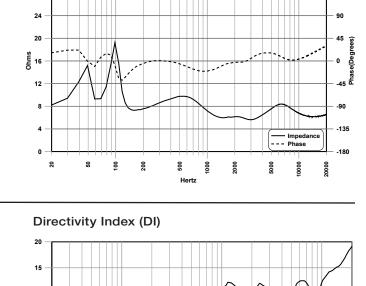






Technical data, EASE<sup>™</sup> plots, SoundTubeSPEC<sup>™</sup> software and product downloads available at www.soundtube.com

Phase/Impedance Response





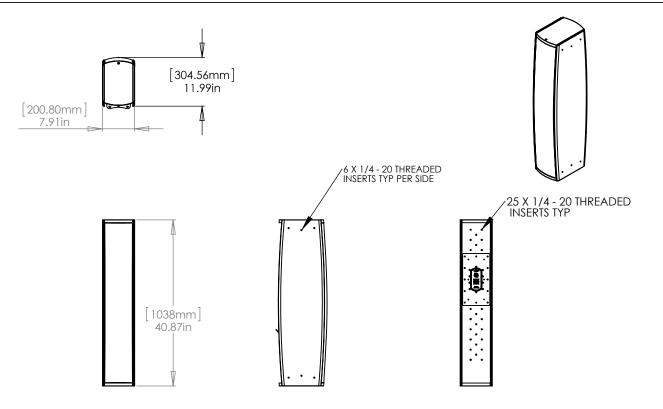
JBE

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## **Mechanical Drawings**



# Accessories

